

Customer No.: 31561
Docket No.: 10/709,179
Application No.: 10544-US-PA

REMARKS

Present Status of Application

The Office Action dated May 03, 2005, objected the drawings for not showing every feature. Claim 15 was objected for informalities. Claims 15-16 and 18 were rejected under 35 USC§102(e) as being anticipated by Ono et al. (US Publication No. 2003/0107129). Claims 17 and 19 were rejected under 35 USC§103(a) as being unpatentable over Ono in view of Akram (US Patent No. 6,861,763). Claim 20 was rejected under 35 USC§103(a) as being unpatentable over Ono in view of Koh (US Publication No. 2004/0135266).

Claims 15 and 20 have been amended for correcting informalities and providing more descriptions for classification purposes. No new matter has been added to the application by the amendments made to the specification, claims and drawings. This Amendment is promptly filed to place the above-captioned case in condition for allowance. After entering the amendments and considering the following discussions, a notice of allowance is respectfully solicited.

Discussion for the objections

The drawings were objected for not showing every feature, especially "a plurality of bonding pads".

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In response to this objection, claim 15 has been amended to change "a plurality of bonding pads" to "at least a bonding pad".

Claim 15 was objected for informalities.

In response to this objection, claim 15 has been amended to correct informalities. Withdrawal of these objections is respectfully requested.

Discussion for 35 USC§102 and 103 rejections

Claims 15-16 and 18 were rejected under 35 USC§102(e) as being anticipated by Ono et al. (US Publication No. 2003/0107129). Claims 17 and 19 were rejected under 35 USC§103(a) as being unpatentable over Ono in view of Akram (US Patent No. 6,861,763). Claim 20 was rejected under 35 USC§103(a) as being unpatentable over Ono in view of Koh (US Publication No. 2004/0135266).

The Office Action considered that Ono substantially disclosed this invention.

Claims 15 and 20 have been amended for correction purposes.

Applicants submit that independent claim 15 patently defines over the prior references for at least the reason that the cited art fails to disclose each and every feature as claimed in the present invention.

The independent claim 15 recites:

15. A method of fabricating bumps on a backside of a chip, comprising the steps of: providing the chip with an active surface having at least a bonding pads thereon and the

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backside;

forming at least a bump pad on the backside of the chip; and
forming a bump on the bump pad.

Applicant respectfully asserts that claim 1 is patentably distinct from the prior art structures, especially at least forming at least a bump pad on the backside of the chip or forming a bump on the bump pad.

Ono discloses a method for fabricating a resin-encapsulated semiconductor device. Ono teaches forming a first interconnect pattern 11, a dielectric film 12 and a second interconnect pattern 14 on a metal plate. Bumps 19 are formed on the bottom surface of the first interconnect pattern 11. The chip 15 is mounted on the dielectric film 12 and connected to the second interconnect pattern 14 by wires 17. As taught by Ono, the second interconnect pattern 14 is formed on an area other than the area where the chip 15 is mounted (paragraph [0029]). Therefore, chip 15 is not mounted directly on the second interconnect pattern 14.

The Office Action considered Ono's chip 15, bump 19 and second interconnect pattern 14 respectively comparable to the chip, the bump and the bump pad of this application. Applicant respectfully disagrees with this consideration.

Even considering Ono's chip 15 and bumps 19 being comparable to the chip and the bump of this invention, Ono fails to disclose or mention forming at least a bump pad

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on the backside of the chip and forming the bump on the bump pad. In fact, Ono's second interconnect pattern 14 is not even connected to chip 15. Moreover, Ono's bump 19 is connected to the first interconnect pattern 11, but not on the second interconnect pattern 14. Ono also fails to disclose forming a protective film on the active surface of the chip before forming the bump pad on the backside of the chip, because the step of encapsulating the chip 15 with the encapsulating resin 18 is performed after mounting the chip to the dielectric film 12 (paragraph [0028]).

Accordingly, the method of the present invention is patentably distinct from the prior art reference Ono because Ono fails to disclose all limitations of claim 15. For at least the foregoing reasons, all pending claims patentably define over the cited reference and should be allowed.

Consequently, reconsideration and withdrawal of these 102 rejections are respectfully requested.

Regarding claims 17, 19 and 20, the Office Action further relied on Akram or Koh for teaching the mask layer or using a wire-binding machine.

Claim 20 has been amended for correction purposes.

As discussed above, the method of the present invention is patentably distinct from the prior art reference because Ono fails to disclose all limitations of independent

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claim 15. However, even considering the teachings of Akram or Koh relating to the features recited in dependent claims, the reference Akram or Koh still fails to remedy the deficiencies of Ono.

As a result, it is respectfully submitted that claims 17 and 19-20 patentably distinguishes over the cited references, either alone or in combination, for at least the reasons stated above as well as for the additional features that this claim recites.

Withdrawal of these rejections under 35 USC 103(a) is respectfully requested.

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CONCLUSION

In view of the foregoing, it is believed that all pending claims are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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Respectfully submitted,

Belinda Lee
Belinda Lee

Registration No.: 46,863

Jianq Chyun Intellectual Property Office
7th Floor-1, No. 100
Roosevelt Road, Section 2
Taipei, 100
Taiwan.
Tel: 011-886-2-2369-2800
Fax: 011-886-2-2369-7233
Email: belinda@jcipgroup.com.tw
Usa@jcipgroup.com.tw